

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A system for multiparameter analysis of analytes, the system comprising:
  - (a) insoluble microparticle primary supports with a largest dimension of 500 µm or less suspended in use in a fluid solution, wherein a plurality of primary analytes are bound to respective primary supports, and each primary support comprises identification means for identification of the primary support and hence for identification of the primary analyte bound to that primary support, and at least one primary analyte is bound to each primary support;
  - (b) at least one secondary analyte suspended in use in the fluid solution; and
  - (c) measuring means arranged in communication with the fluid solution for monitoring interaction between the primary analyte and secondary analyte, characterised in that:
- (d)(b) insoluble microparticle secondary supports with a largest dimension less than or equal to the largest dimension of the primary supports are suspended in use in the fluid solution, wherein a plurality of secondary analytes are bound to respective secondary supports, and each secondary support comprises identification means for identification of the secondary support and hence for identification of the secondary analyte bound to that secondary support, and the at least one secondary

analyte is bound to each of the secondary supports to suspend the at least one secondary analyte in use in the fluid solution; and

(e)(c) measuring means arranged in communication with the fluid solution for monitoring interaction between the primary analytes and secondary analytes, the measuring means ~~is- being~~ arranged to detect any binding interaction between one or more primary analytes and one or more secondary analytes by detecting the identification means of the primary and secondary supports attached thereto.

2. (Previously presented) The system according to Claim 1, wherein the largest dimension of the primary support is less than 300  $\mu\text{m}$ .

3. (Previously presented) The system according to Claim 2, wherein the largest dimension of the primary support is less than 150  $\mu\text{m}$ .

4. (Previously presented) The system according to Claim 3, wherein the largest dimension of the primary support is less than 50  $\mu\text{m}$ .

5. (Previously presented) The system according to Claim 1, wherein the largest dimension of the secondary support is less than that of the primary support.

6. (Previously presented) The system according to Claim 5, wherein the largest dimension of the secondary support is less than 100  $\mu\text{m}$ .

7. (Previously presented) The system according to Claim 6, wherein the largest dimension of the secondary support is less than 50  $\mu\text{m}$ .
8. (Previously presented) The system according to Claim 7, wherein the largest dimension of the secondary support is less than 10  $\mu\text{m}$ .
9. (Previously presented) The system according to Claim 1, wherein at least one of the identification means comprises one or more distinguishing geometrical features enabling identification of each support.
10. (Previously presented) The system according to Claim 1, wherein at least one of the identification means is a radio frequency identification transponder (RFID).
11. (Currently Amended) The system according to Claim 1, wherein at least one of the identification means is an optical-identification identifier.
12. (Previously presented) The system according to Claim 1, wherein the primary or secondary supports are present on only a portion of the surface of their respective primary or secondary analyte.

13. (Previously presented) The system according to Claim 1, wherein the fluid solution is a liquid.

14. (Currently amended) The system according to Claim 13, wherein the liquid suspension is placed on a solid substrate, which substrate comprises a main surface extending substantially in a two dimensional plane and has tertiary analytes fixedly arranged thereon for positional identification, the tertiary analytes being capable of interacting with ~~and~~ the at least one primary analyte.

15. (Currently Amended) A method of multiparameter analysis of analytes, the method comprising the steps of:

- (a) providing ~~at least one~~ insoluble microparticle primary supports, each with a largest dimension of 500  $\mu\text{m}$  or less and with identification means for identification of the primary support;
- (b) binding ~~at least one~~ a plurality of primary analytes to each respective primary supports;
- (c) suspending the primary supports with its their primary analytes ~~and~~ at least one secondary analyte in a fluid solution; and
- (d) — providing measuring means in communication with the fluid solution for monitoring interaction between the primary analyte and the secondary analyte, characterised in that the method further comprises the steps of:

(e)(d) providing insoluble microparticle secondary supports, each with a largest dimension less than or equal to the largest dimension of the primary supports and with identification means for identification of the secondary support;

(f)(e) binding ~~the at least one~~ a plurality of secondary analytes to ~~each of the~~ the respective secondary supports,

(g)(f) suspending the secondary supports with their secondary analytes in the fluid solution to suspend the ~~at least one~~ secondary analyte in the fluid solution, and

(g) providing measuring means in communication with the fluid solution for monitoring interaction between the primary analytes and the secondary analytes, and

(h) arranging for the measuring means to detect any binding interaction between one or more primary analytes and one or more secondary analytes by detecting the identification means of the primary and secondary supports attached thereto.

16. (Cancelled).

17. (Cancelled).

18. (Previously presented) The system according to Claim 9, wherein the one or more distinguishing geometrical features are selected from the group consisting of shape, size, barcode and dotcode.

19. (Currently amended) The system according to Claim 11, wherein the optical identification-identifier is fluorescence or colour based.